

# Thermal Control System (TCS)

The TCS maintains ISS temperatures within defined limits. The four components used in the Passive Thermal Control System (PTCS) are insulation, surface coatings, heaters, and heat pipes.

The Active Thermal Control System (ATCS) is required when the environment or the heat loads exceed the capabilities of the PTCS. The ATCS uses a mechanically pumped fluid in closed-loop circuits to perform three functions: heat collection, heat transportation, and heat rejection.

Inside the habitable modules, the internal ATCS uses circulating water to transport heat and cool equipment. Outside the habitable modules, the external ATCS uses circulating ammonia to transport heat and cool equipment.



Port and Starboard Radiator panels from truss below U.S. solar array.

